

REMARKS

Claims 1, 5, 6 and 8-11 are pending. Claims 1 and 10 are the only independent claims.

Claims 1,6 and 10 were rejected under 35 U.S.C. 103(a) over Laine (US Patent No. 6,252,690) in view of Scifres (US Patent No. 6,414,774). Claim 5 was rejected under 35 U.S.C. 103(a) over Laine in view of Scifres (US Patent No. 6,414,774) and further in view of Heflinger (US Patent No. 5,726,786). Claims 8, 9 and 11 were rejected under 35 U.S.C. 103(a) over Laine in view of Scifres and further in view of Ohhata et al. (US Patent No. 6,304,357).

Applicants traverse and submit that independent claims 1 and 10 are patentable for at least the following reasons.

Claim 1 is directed to an optical data bus communication system of an artificial satellite. The system comprises: a plurality of first devices, each of which is equipped with an optical transmitter each transmitter transmitting signals of a differing wavelength; a reflection means that is provided on the entire inner surface of, or at prescribed locations inside, the case of the artificial satellite; and a plurality of second devices, each of which is equipped with an optical receiver that receives optical signals that are transmitted from the optical transmitters both directly and after reflection and diffusing by the reflection means, each receiver receiving optical signals of a different wavelength and reproducing the optical signals from these received signals.

In the Office Action, it was conceded that Laine does not teach the feature by which each transmitter transmits signals of a different wavelength, and each receiver receives optical signals of a different wavelength. The Office Action relied upon Scifres to supply this feature.

Laine is directed to a satellite onboard data transmission system using senders and receivers interconnected by non-directional infra-red links. In Laine, the telecontrol (TC) signals are created using infra-red sender diodes chosen to emit wide and only slightly directional beams. The TC signals formatted by the central unit include an addressing header for each equipment unit. The addressing header specifies which of the equipment units should receive the message in a particular signal. See col. 4, lines 5-12.

Scifres is directed to a laser diode wireless network. In one embodiment, the infrared carrier wavelengths of the lasers transmitted by different terminals can be mutually exclusive. See col. 2, lines 27-30. In another disclosed embodiment, the terminals can be time multiplexed, rather than wavelength diverse.

The position was taken in the Office Action that it would have been obvious to replace the header addressing scheme of Laine with wavelength diverse messaging, as discussed in Scifres. Applicants traverse.

In order to combine references, there must be some teaching or suggestion to combine them, and in particular, some motivation must be set forth for making the proposed modification. In the Office Action, it was alleged that “[o]ne of ordinary skill in the art would have been motivated to [make the proposed combination] since allowing reducing the interference between signals. Office Action at page 3. This is not correct as Scifres’ system would not reduce interference between signals as compared to the system of Laine.

In a system such as Laine’s, which does not depend on the simultaneous use of signals of different wavelengths, but which relies instead on *broadcast* messages using an address header unique to the desired receiver, it is very unlikely to encounter *any* interference between signals. Because an addressing header is used, messages can be broadcast and only the equipment intended to receive the message will understand the message. Other

equipment will ignore the messages as not being directed to them. Moreover, the single broadcast message will not interfere *with itself*.

In contrast, in Scifres, the use of wavelength diversity makes it much *more* likely that signal interference will occur, in view of the fact that signals of different wavelengths will be transmitted *at the same time*. Thus, contrary to the position taken in the Office Action, there is no motivation to make the proposed combination/modification, since (1) no interference would ever occur in Laine's system; and (2) Scifres use of simultaneously transmitted signals of different wavelengths are more likely to interfere with one another than signals having the same wavelength.

Thus, the combination of Laine and Scifres is improper at least because no technically sound motivation to combine the references has been set forth in the Office Action. For at least this reason, no prima facie case of obviousness is made out with regard to claim 1. Claim 10 recites a similar feature and is believed patentable for substantially similar reasons.

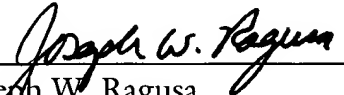
For at least the above reasons, no prima facie case of obviousness has been set forth with regard to claim 1. Claim 10 is a corresponding method claim that recites similar features and is believed patentable for similar reasons.

The other claims in this application are each dependent from one or the other of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing remarks, Applicants respectfully request favorable reconsideration and passage to issuance of the present application.

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Respectfully submitted,

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